ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 629018

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	3a. USQ Required?	4. Date
Supplemental [] Direct Revision [X] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	John H. Baldwin, Characterization Technical Basis, R2-12, 373-4533	[] Yes [X] No	03/07/96
	5. Project Title/No./Work Order No. Tank 241-BY-108, Core Samples 98 & 104	6. Bldg./Sys./Fac. No. N/A	7. Approval Designator NA
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-DP-145, Rev. 1A	9. Related ECN No(s). N/A	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

The narrative to this report has been revised and is replacing the previously issued one.

13a. Justification (mark one)

Criteria Change	[X]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

13b. Justification Details

This ECN changes affect the following pages.
Remove cover page Rev. 1A and insert cover page Rev. 1B
Remove table of contents page ii Rev. 1A, and insert page ii Rev. 1B
Remove page 1 Rev. 1A and insert page 1 Rev. 1B
Insert page 2 Rev. 1B
Remove pages 2 through 8 Rev. 1A and insert pages 3 through 8 Rev. 1B

14. Distribution (include name, MSIN, and no. of copies)

See Attached Distribution Sheet.

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DATE: MAR 13 1995 STA: 4 HANFORD RELEASE ID: 3

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 629018

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[[	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog. Eng. John H. Baldwin: John Baldwin	3/13/96	PE	
Cog. Mgr. John G. Kristofzski: JM Sasaki for JG Kristofzski	3/13/96	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other		Other	
		DEPARTMENT OF ENERGY	
		Signature or a Control Number that tracks the Approval Signature	
		ADDITIONAL	

REVISED FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

John H. Baldwin
Westinghouse Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

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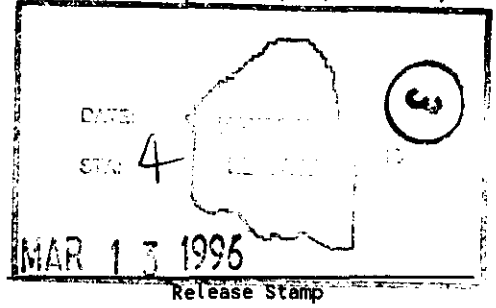
Abstract: N/A

Release Approval 3/13/96 Date



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RECORD OF REVISION	(1) Document Number WHC-SD-WM-DP-145	Page 1

(2) Title

FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

CHANGE CONTROL RECORD

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release	
		(5) Cog. Engr.	(6) Cog. Mgr. Date
0	(7) Initial released this document on 10/23/95 per EDT-613451	J. H Baldwin	J. G. Kristofzski
1	Incorporate ECN-629001	J. H Baldwin	J.G. Kristofzski
1A RS	Incorporate ECN-629009	J. H Baldwin	J.G. Kristofzski 2-28-96
1B RS	incorporate per ECN-629018	J.H. Baldwin	J.G. Kristofzski for JG Kristofzski 3/18/96

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-145, REV. 1B

ANALYTICAL SERVICES

REVISED FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104

Project Coordinator: JOHN H. BALDWIN

Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management

by

Westinghouse Hanford Company
Box 1970
Richland, Washington

TABLE OF CONTENTS

This document consists of pages 1 through 85, plus pages 5, 6, 7, 8, 16 and 17 were intentionally left blank.

NARRATIVE

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REVISED FINAL REPORT FOR TANK 241-BY-108 ROTARY SAMPLES, CORES 98 AND 104

1.0 INTRODUCTION AND SUMMARY

This is the final format IV report for the tank 241-BY-108(BY-108) rotary (push mode) sampling characterization effort. This report transmits additional analytical data not provided in reference [1].

Core samples from tank BY-108 were received at the 222-S Laboratories and underwent analysis to satisfy the analytical requirements of the *Tank 241-BY-108 Rotary Mode Core Sampling and Analysis Plan* (SAP)[2]). Applicable data quality objectives for this Tank Characterization Plan (TCP) included Safety Screening, Ferrocyanide, Pretreatment and Organic.

This final report provides adiabatic calorimetry data not provided in the reference [1]. Also included are the final, validated, analytical results of the analysis for tank BY-108 core samples collected on July 27 through August 16, 1995 (Core 98, Segments 1-4 and Core 104 Segments 1-5). The 222-S Laboratories received, extruded, and analyzed each sample in accordance with the TCP. Partial BY-108 core segments from cores 97, 100 and 102 were received from BY-108 but were not analyzed as they duplicated segments of cores 98 and 104. Core 99, a core taken from the same riser as core 98, was sent to Pacific Northwest Laboratory (PNL) 325 Building for analysis and the results of those analyses are included in reference [1].

As required by the *Tank Safety Screening Data Quality Objective* (DQO) [3], a 95% confidence interval was calculated for those sample results exceeding an action limit. The precision requirements of the SAP were satisfied by comparing a one-sided 95% confidence interval of the mean for each sample to the action limit. The Differential Scanning Calorimetry (DSC) analysis at the 95% confidence level found the DSC results of three samples exceeded the maximum limit stated in the DQO. Notifications, by the chemist and project coordinator concerning DSC values that exceeded the action limit were made as required.

Before samples were removed from Tank BY-108, a vapor test was The vapor test determined an LEL of 5.0%, an oxygen content of 20 %, and a total organic carbon content of 71.8 ppm. Reference [4] provides detailed headspace gas and vapor characterization results for tank BY-108.

When compared to the decision rules in the safety screening DQO, the tank can be considered "safe".

Responsible Project Coordinator: J. H. Baldwin

REFERENCE

[1] J. H. Baldwin, *Revised 60-Day Safety Screening and Ferrocyanide Results for Tank 241-BY-108, Rotary Samples, Core 98 and Core 104*, WHC-SD-WM-DP-145, Rev. 1, Westinghouse Hanford Company, Richland, Washington, October 18, 1995.

[2] J. H. Baldwin, *Tank 241-BY-108 Rotary Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-059, Rev. 0, Westinghouse Hanford Company, Richland, Washington, July 19, 1995.

[3] H. Babad, J. W. Hunt, and K. S. Redus, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 1, Westinghouse Hanford Company, Richland, Washington, April 27, 1995.

[4] J. L. Huckaby, D. R. Bratzel, *Tank 241-BY-108 Headspace Gas and Vapor Characterization Results for Samples Collected in March 1994 and October 1994.*, WHC-SD-WM-ER-422, Rev. 2, UC-2070, Westinghouse Hanford Company, Richland, Washington, September 26, 1995.

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DISTRIBUTION SHEET

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Distribution	Data Assessment and Interpretation	Date: 03/12/96
Project Title/Work Order **WHC-SD-WM-DP-145, REV. 1B"** REVISED FINAL REPORT FOR TANK 241-BY-108, ROTARY SAMPLES CORE 98 AND CORE 104"		EDT NO.: 613451(Ref) ECN NO.: 629018

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